

# ANALYSIS OF STEAM-BASED LEARNING (SCIENCE, TECHNOLOGY, ENGINEERING, ART, AND MATHEMATICS) TO IMPROVE EARLY CHILDHOOD'S CRITICAL THINKING SKILLS

Education in the 21st century must be oriented towards mathematics and natural sciences along with social and humanitarian sciences. Education builds scientific attitudes that are critical, logical, analytical, creative and adaptable. At every level of education, it is necessary to instill a spirit of independence. Innovation is key in Science, Technology, Engineering, Art and Mathematic (STEAM) learning, which requires schools to form students to have 21st century competencies who are able to think critically, creatively collaboratively and communicatively. To achieve this goal, an approach in learning is needed that is able to make students become critical, creative, collaborative and communicative with STEAM-based learning. This study aims to determine whether children's critical thinking skills can improve through the application of STEAM-based learning in Mataram Model State Kindergarten. This research was conducted at Model Mataram State Kindergarten. This study used the Classroom Action Research (PTK) method with two cycles, each cycle consisting of two meetings. The research procedure includes planning, action implementation, observation, and reflection. The subjects of this study were all group B children at TK Negeri Model Mataram, consisting of 19 students. The data collection methods used were observation and documentation, with data analysis techniques using qualitative descriptive analysis. The results showed that critical thinking skills improved after the action was taken with the application of STEAM-based learning. The results of children's critical thinking skills in pre-action amounted to 33.6% in the category of starting to improve. In cycle I, it increased with an average percentage value reaching 53.3% in the Increasing category, and experienced a further increase in cycle II with an average percentage value reaching 77.7% in the highly increasing category, and can be said to be successful because it is in accordance with the achievement level indicator of 76%. So it can be concluded that STEAM-based learning can improve children's critical thinking skills at TK Negeri Model Mataram.

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